

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

INTELLECTUAL VENTURES II LLC,

Plaintiff,

V.

SPRINT SPECTRUM L.P., NEXTEL
OPERATIONS, INC., ERICSSON INC.,
TELEFONAKTIEBOLAGET LM ERICSSON,
and ALCATEL-LUCENT USA INC.,

T-MOBILE USA, INC., T-MOBILE US, INC.,
ERICSSON INC., and
TELEFONAKTIEBOLAGET LM ERICSSON,

Defendants.

[illegible]

Civil Action No. 2:17-cv-662-JRG
LEAD

JURY TRIAL DEMANDED

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**PLAINTIFF INTELLECTUAL VENTURES' SUR-REPLY BRIEF IN OPPOSITION TO
THE T-MOBILE AND SPRINT DEFENDANTS' MOTION TO DISMISS**

I. INTRODUCTION

Defendants’ motion to dismiss attempts to invalidate all claims across five patents while only substantively addressing three claims. Not only are Defendants’ arguments factually incorrect but they are legally insufficient. It is Defendants’ burden to establish that each claim is patent-ineligible, yet even after IV’s Opposition explicitly identified the additional limitations in other claims that would affect the § 101 inquiry, Defendants have still failed to address these claims, resting instead on their own “assertion” that the claims are representative. Defendants’ Reply also highlights many disputed factual issues regarding the meaning of the claims and the scope of the prior art which preclude a ruling on § 101 at this early stage.

II. DEFENDANTS FAIL TO APPLY THE RULE 12 STANDARD

In ruling on a motion to dismiss under Rule 12(b)(6), a court must accept that “all wellpleaded facts are true and view those facts in the light most favorable to the plaintiff.” *Diamond Grading Techs. Inc. v. Am. Gem Soc’y*, No. 2:14-cv-1161-RWS-RSP, 2016 WL 5719700, at *1 (E.D. Tex. Sept. 12, 2016). Under Fifth Circuit law, which applies in this instance, “motions to dismiss under Rule 12(b)(6) are viewed with disfavor and are rarely granted.” *Motorola Mobility, Inc. v. Tivo Inc.*, No. 5:11-cv-053-JRG, 2012 WL 12840340, at *2 (E.D. Tex. Nov. 30, 2012) (denying motion asserting § 101). As discussed below, Defendants make numerous factual assertions regarding the state of the prior art and the scope and content of the claims that they allege are representative. *Realtime Data, LLC v. Carbonite, Inc.*, No. 6:17-cv-00121, 2017 WL 4693969, at *2 (E.D. Tex. Sept. 20, 2017) (noting that the § 101 inquiry “may contain underlying factual issues” (quoting *Mortg. Grader, Inc. v. First Choice Loan Servs.*, 811 F.3d 1314, 1325 (Fed. Cir. 2016))). Defendants’ reliance on attorney argument both violates Rule 12 and draws attention to the factual disputes which must be resolved before a ruling on patent eligibility. *See, e.g., T-Rex Prop. AB v. Regal Entm’t Grp.*, No. 6:16-cv-927-

RWS-KNM, 2017 WL 4229372, at *7 (E.D. Tex. Aug. 31, 2017).

III. THE '330 AND '357 PATENTS ARE PATENT ELIGIBLE

Defendants' Reply includes several unsupported factual assertions regarding both the scope of the prior art and the scope of claim 26. For example, Defendants characterize the scope of the prior art, arguing that the problems identified by IV (including inefficiency and signal fading) simply do not exist because they are not expressly referenced in the specification. D.I. 65 ("Reply") at 1. However, this is exactly the type of dispute which is resolved through fact discovery, namely how a POSITA understands the scope and content of the prior art. Similarly, Defendants oversimplify how a POSITA would interpret the phrase "indication of a shared channel." Reply at 4. Defendants disregard the claim limitation as "generic," *i.e.*, within the scope of the prior art, without providing any support. *Id.* Defendants cannot dispense with these issues using only attorney argument; there is a meaningful factual dispute between the parties regarding the appropriate interpretation of the claim language.

In arguing that claim 26 is abstract, Defendants dismiss the technical limitations as merely the "technological environment." Reply at 1-2. This is incorrect; these limitations place meaningful constraints on the claim. *See* D.I. 61 ("Opp.") at 8-10. Moreover, the Patent Office has already considered the technical environment at issue and determined the claim to be inventive. Specifically, the Patent Office expressly found during prosecution of the '330 patent that the prior art did not disclose "monitoring, by the UE in a long-term evolution (LTE) network, downlink transmissions for a signal to indicate a page from a network device, wherein the signal includes an indication of a shared channel and the signal is derived from a radio network temporary identifier (RNTI)." *See* D.I. 61-1 ('330 patent file history, 2016-08-17 Notice of Allowance) at 6.

Defendants try to revive the fighter jet analogy by arguing that the claims do not specify

how the monitoring is performed, *i.e.*, continuous or discontinuous. Reply at 2. This is incorrect. For example, several dependent claims include the limitation that the paging signal is sent at a specific “time interval,” and thus, the UE does not monitor continuously. ’330 patent, cls. 8, 10, 17, 25, 27, 34. This underscores how Defendants’ assertion that claim 26 is representative is contradicted by specific limitations in other claims. Defendants also argue that the analogy still holds true by disputing that the second paging signal can be sent on any channel selected by the network. Reply at 2. Again, this is contradicted by the claim language. Claim 26 states that the paging signal “includes an indication of a shared channel.” Thus, the eNodeB makes a selection and determines the allocation of resources for sending the paging signal. *See, e.g.*, ’330 patent, cls. 1, 9, 18, 26; ’357 patent, cls. 11, 30, 47 (each reciting, “the message having an allocation of resources for a shared channel”).

Defendants’ contention that the patents lack an inventive concept also highlights the factual disputes between the parties. Reply at 3-4. Defendants argue that the claimed paging method is already described in the specification as a “*conventional* paging procedure.” Reply at 3. As IV explained in its Opposition, this argument depends on disregarding numerous claim limitations, as well as the fact that the Patent Office allowed the claims as patentable over the prior art. Opp. at 9-10. Defendants are simply incorrect that IV does not dispute their analysis. The combination of elements in claim 26 provides an inventive solution that is only applicable to wireless communication systems. *See* ’330 patent, Abstract, 11:6-9, 11:26-13:23, cls. 1-34. Yet, Defendants dismiss these limitations as “technological environment” without substantively responding to IV’s arguments. Reply at 3.

The invention of claim 26 contains an inventive concept because it allows the network to select the allocation of resources (*i.e.*, “an indication of a shared channel”) for any given paging

message. This allows the system to account for both channel conditions and capacity considerations and therefore improve the reliability of the paging message's delivery.

Defendants do not counter this statement; rather they argue that these are unclaimed concepts. Reply at 3-4. To the contrary, the selection of the allocation of resources is expressly claimed as the "indication of a shared channel." *See, e.g.*, '330 patent, cl. 26. If Defendants dispute the meaning that this limitation would have to a POSITA, then this is an issue for claim construction that should be resolved before addressing § 101.

IV. THE '018 AND '466 PATENTS ARE PATENT ELIGIBLE

Defendants' Reply admits that there are four disputed factual issues, any one of which should prevent the Court from granting a motion to dismiss. Reply at 5–8. Moreover, the intrinsic evidence shows that in each instance, Defendants' version of the "facts" is mistaken.

The first disputed issue of fact is fundamental: identifying the claimed invention of the '018 and '466 patents. Defendants do not say what the invention is, but instead rely on attorney argument (without evidence) to say that the embodiment described in Figure 6 of the '018 and '466 patents is not "related to the claimed embodiment of 'allocating . . . resources . . . [in a certain manner].'" Reply at 5. In fact, the claims of the '018 and '466 patents map directly onto the embodiment of Figure 6. *See also* '018 patent, 10:18-12:14 (describing this embodiment). Figure 6 shows an "enhanced embodiment" of Figure 5, which addresses a signaling problem when many user equipment ("UE," or smartphones) need limited resources (*e.g.*, bandwidth and/or timeslots to uplink to an eNodeB base station). '018 patent, 10:19-33. The Figure 6 embodiment is reflected in "representative" claim 6, including:

[a] a first parameter for each channel/radio bearer, *see, e.g., id.* at 9:63–67, Fig. 5 ref. nos. 550, 555 (S_{tier} parameters), and a separate allocation message, *see, e.g., id.* at 10:2–4, 10:9–10, Fig. 5 ref. 560 ("Single allocation of physical resources to UE");

[b] the UE allocates resources to a channel/radio bearer considering a second parameter above zero and a third parameter that can be zero, *see, e.g., id.* Fig. 5 ref. 535, Fig. 6 refs. 610–665 (allocating resources based on Resource Allocation Unit (RAAU) parameters);

[c] the second and third parameters are derived from the first parameter, *see, e.g., id.* at cols. 10–12, equations [6]–[12] (deriving the RAAU parameters based on S_q , i.e., the S_{tier} value for each particular queue).

The claimed invention thus lets the phone determine the allocations instead of the eNodeB, using limited information (a first parameter and an allocation message), and thus avoids the problem of many individual allocation messages consuming bandwidth “overhead.” *See, e.g., id.* at 10:19–34.

The second disputed factual issue is the overbreadth of Defendants’ “abstract idea.” Reply at 5–6. Even after IV’s Opposition, Defendants simply ignore where the allocation is made (distributed among individual phones instead of centralized at an eNodeB) and the volume of information used to make that allocation. The problem solved by having a phone calculate its own allocations with little input is special to wireless networks and is brought about by a scarcity of bandwidth to be shared among many phone connected to a single eNodeB. *See, e.g.,* ’018 patent, 10:19–34. The equipment used—user equipment (e.g., phones) and wireless network equipment (e.g., eNodeBs)—is not generic, but instead is specific to the kind of problem addressed by the ’018 and ’466 patents. Thus, the “idea” behind the patent is not abstract, but instead is focused on a particular problem with wireless networking technology.

Third, Defendants mistakenly claim that there is no inventive concept because allowing phones to perform the allocation, and doing so with limited information, are supposedly not part of the claims. Reply at 6–7. But even Defendants’ “representative” claim 6 is a method performed by a user equipment, and it requires that the UE receive only the first parameter and an allocation message. ’466 patent, 14:39–45. Thus, the claim elements go directly to the

solution provided by the inventive concept. Moreover, Defendants' suggestion that the '018 and '466 patents allow "any suitable distribution of functionality" is disingenuous (Reply at 7) because that quote clearly refers to a distribution among ASIC hardware, software, and firmware—not among the UE and the eNodeB. '018 patent, 12:47-13:3.

Finally, Defendants dismiss the dependent buffer occupancy claims, concluding (without evidence) that they just are "insignificant pre- or post-solution activity" and that "Claim 6 does not use the buffer occupancy indication." Reply at 8. To the contrary, the significance of buffer occupancies is illustrated by the fact that every single independent claim in both the '018 and '466 patents has a dependent claim for buffer occupancy indications. '466 patent, cls. 2, 5, 8, 10; '018 patent, cls. 2, 6, 10, 13, 17, 21, 25. Buffer occupancy indications are used integrally with plurality of radio bearers/channels in the Figure 6 embodiment, whereby a phone calculates uplink allocations for those radio bearers/channels. *See* '018 patent, 10:38-43 ("The algorithm [in Figure 6] may be run when a number of active users (i.e. those users known to have a buffer occupancy greater than zero in any queue) is greater than a known fixed parameter."); *see also id.* at 4:62-65 ("The provision of a signal processor arranged to identify buffer occupancy for individual radio bearers (or services) advantageously enables any system to provide prioritization, whether within a user's allocation or across users."). Defendants' "abstract idea" completely ignores these dependent claims, and therefore is not representative. *See Cronos Techs., LLC v. Expedia, Inc.*, No. 13-cv-1538, 2015 WL 5234040, at *1 (D. Del. Sep. 8, 2015) ("Defendants have not adequately articulated why each of claim 22's dependent claims relates to the same abstract idea purportedly embodied by claim 22.").

The Court should not grant a motion to dismiss when factual issues such as these remain. The intrinsic evidence shows that the '018 and '466 patents are not directed to an abstract idea

and that they further contain an inventive concept that transforms any abstraction into patentable subject matter.

V. THE '828 PATENT IS PATENT ELIGIBLE

Defendants' argument fails on its own terms. Even if Defendants' characterization of claim 15 as directed to "selectively calculating a transmit power level based on feedback from the receiver and/or transmitter's own measurements" (Reply at 8) were correct, this is not an abstract idea. Moreover, the claimed feature of "receiving, on a single physical channel ... an allocation of a scheduled uplink resource and a TPC command," solves technical problems related to signaling overhead that arise in the context of wireless network. '828 patent, 12:39-54. This is not, as Defendants argue, merely a field of use limitation; it is the source of the technical problem.¹ The '828 patent is directed to a particular technical solution: the dynamic adjustment of the UE "transmit power" based on: (1) "TPC" commands received from the network; and/or (2) determinations of "path loss." *Id.* at 7:63-8:3, 11:64-12:14.

Defendants' attempt to compare claim 15 to the claim at issue in *CCE* misses the mark. Reply at 9 (citing *Cellular Commc'ns Equip. LLC v. AT&T Inc.*, No. 2-15-cv-00576-RWS-RSP, 2017 WL 2984074, at *3 (E.D. Tex. June 27, 2017)). This court found the *CCE* claim to be abstract because it was directed to "calculating and reporting the missing power of a network device" and did not actually claim any of the uses of improved power headroom reporting that were mentioned in the specification. *CCE*, 2017 WL 2984074 at *1. The issue was not that the claimed calculated power level would be used at some time in the future, it is that there was no claimed use for the calculated power level at all. By contrast, claim 15 *requires* the UE to apply the calculated power level when transmitting data. '828 patent, cl. 15 ("an allocation of a

¹ Claim 15 requires communication between a "network" and a "UE." '828 patent, 14:41-61.

scheduled uplink resource to transmit data to the wireless network at a power level calculated by the UE based on the path loss.”).

The inventive concept of the ’828 patent is found in the combined open loop/closed loop scheme for dynamically controlling UE transmit power in a wireless network in order to improve the quality of wireless communication. ’828 patent, 4:11-34, 7:64-8:3, 11:43-12:54, Figs. 5A, 5B and 5C. As explained in IV’s Opposition, the method of claim 15 provides two advantages over prior art schemes. First, the combined open loop/closed loop features compensate for effects of path loss and interference more efficiently than prior art schemes. ’828 patent, 7:20-8:3, 11:43-12:38, Figs. 5A, 5B, 5C. Second, the use of a “single physical channel” to send and receive both “an allocation of a scheduled uplink resource and a TPC command,” as explicitly required in step [c], provides an advantage in terms of “signaling efficiency” that is described in detail in the ’828 patent specification. *Id.*, 12:39-54. As explained below, Defendants attempt to raise a factual dispute about the first advantage by arguing it was known in the prior art or that it flows from an embodiment other than the one recited in claim 15, but they ignore the second advantage entirely, thereby effectively conceding that it favors a finding of eligibility. Reply at 8-10. Regardless, these are issues of fact that warrant a denial of this motion.

Defendants are also mistaken on the facts concerning the first improvement relating to efficient compensation for path loss and interference. Reply at 8-9. Contrary to Defendants’ assertions, this improvement is well described by diagrams in the ’828 patent showing an improved signal-to-noise-plus-interference ratio (“SNIR”) for the “combined scheme” as compared with prior art “Open loop” and “Closed loop” schemes. ’828 patent, 11:43-12:38, Figs. 5A, 5B, 5C. And contrary to Defendants’ arguments (Reply at 8-9), this SNIR improvement is attributable to the method of claim 15. Defendants concede that this

improvement is attributable to a “combined loops” embodiment shown in Figure 4, but offer an unsupported attorney argument that it is not attributable to the method of claim 15. *Id.* This argument fails because Defendants concede that the method of claim 15 applies the “combined loops” scheme at least for the “calculating” step. *Id.* Defendants offer no cogent reason why the method of claim 15 would not yield the improved SNIR performance described in the specification. *Id.* Thus, the Defendants have not even come close to demonstrating that the SNIR improvement is “unrelated to the challenged claim.” *Id.*

Defendants offer no reply concerning the factual dispute concerning the inventive concept and improvements over prior art reflected in step [c] of claim 15 of the '828 patent: “receiving, on a single physical channel ... an allocation of a scheduled uplink resource and a TPC command.” Opp. at 26-29. As described in the '828 patent, this feature provides an improvement over prior art power control schemes by reducing “signalling overhead.” '828 patent, 12:39-54. The specification explains that this “new physical channel” reduces improves “signalling efficiency” relative to prior art power control schemes by reducing signalling overhead. *Id.* As IV stated in its Opposition, the “Defendants raise a factual dispute about whether or not the individual step [c] of claim 15 ... is conventional.” Opp. at 29-30. Yet Defendants’ response is limited to a footnoted attorney argument that the “single physical channel” merely limits the claim to a technological environment. Reply at 8, n.9. This is far from sufficient to resolve an important dispute about the subject matter of claim 15. All of the briefing now before the Court clearly establishes that there is at least a factual dispute about whether or not the features recited in step [c], taken individually or in combination with the other limitations of claim 15, constitute an improvement over prior art that either removes claim 15 from the realm of abstract ideas, or establishes it firmly as drawn to an inventive concept.

VI. CLAIMS THAT ARE SUBJECT OF MOTION ARE NOT REPRESENTATIVE

Defendants argue that whole counts of IV's complaint for five patents should be dismissed based on briefing for just three claims. It is Defendants' burden to establish that the selected claims are representative: "[W]hen the movant relies on a representative claim in its § 101 analysis, it bears the burden of showing that the other asserted claims are 'substantially similar and linked to the same abstract idea.'" *Perdiemco, LLC v. Industrack LLC*, No. 2:15-cv-727-JRG-RSP, 2016 WL 5719697, at *7 (E.D. Tex. Sep. 21, 2016) (quoting *Content Extraction & Transmission LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343, 1348 (Fed. Cir. 2014)). IV's Opposition identified numerous limitations of other independent and dependent claims in the asserted patents that affect the § 101 analysis. Opp. at 7-8, 16-17, 22. Yet Defendants have no substantive response except to argue that IV has not "rebut[ted] Defendants' *assertion*" that the claims are representative. Reply at 10 (emphasis added); *see also id.* at 4-5, 7. This is wholly inadequate to meet their burden and is legally insufficient to invalidate five patents.

VII. CONCLUSION

For all the foregoing reasons, the Court should deny Defendants' motion to dismiss.

DATED: January 24, 2018

Respectfully submitted,

/s/ Martin J. Black by permission Claire Henry

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CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing document was filed electronically in compliance with Local Rule CV-5(a). Therefore, this document was served on all counsel who are deemed to have consented to electronic service. Local Rule CV-5(a)(3)(A). Pursuant to Fed. R. Civ. P. 5(d) and Local Rule CV-5(d) and (e), all other counsel of record not deemed to have consented to electronic service were served with a true and correct copy of the foregoing by email on this the 24th day of January, 2018.

/s/ Claire Henry